

WJEC LEVEL 3 FOOD SCIENCE AND NUTRITION

Summer task 2025

Before the course starts you need to carry out the research and tasks below in detail.

Task 1: Nutrition is a key part of the course and you will need to have a clear understanding of nutrients and healthy eating.

- a) Watch the video link to learn more about what is meant by a **healthy diet**. Explain what a healthy diet is and the key elements of the Eatwell Guide. Present your findings in a mind map format. <https://www.youtube.com/watch?v=1tJYcNt6Bpk>
- b) Explore the concept of **energy intake**, expenditure and energy balance. Watch the podcast about **energy** and answer the questions below.
<https://www.youtube.com/watch?v=d-5w67NAOlo>
- What is energy?
 - Why do we need to eat food?
 - How much energy do we need?
 - What are the factors that affect 'energy out'?
 - What is energy balance?

Task 2: Use the internet to research at least 7 food poisoning bacteria. You will need to note the most common types of food bacteria, the symptoms, sources (where it might be found), how it is controlled and on-set time of each bacteria. Also, discuss the difference between **pathogenic and non-pathogenic bacteria**. (Present your findings in a table format).

Task 3: Food Presentation: It is important to understand how to layout food products in order to improve their visual appearance. Use the following websites and videos to investigate what makes food look good. You are welcome to search for other tips and guidance on food presentation techniques. This is particularly important, as you will be required to photograph the products you make. Write a list of tips and ideas for successful food presentation.



<http://www.howtocookgourmet.com/foodpresentationtips.html>

https://www.youtube.com/watch?v=Udzs_MPNpMQ

<https://www.youtube.com/watch?v=9YBnczqciHI>

Task 4: Food in the news: Create a "food in the news" media folder. Between now and the beginning of September collect any articles that you find referring to Food and Nutrition. The Guardian and Observer newspapers, the BBC news and the BBC Good Food Magazine are good starting places. You could also look at the free papers and magazines available at food retailers.

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Task 5: Select 2 articles that you think are important/news worthy. Summarise the key points and explain why you think that each article was published/written.



Task 6: Undertake the following and present your work on a single A3 sheet in mind map format. Photograph your practical work and include this on the A3 sheet.

Select one of the scenarios below and complete the activities

Nursery scenario

The cook at your local children's nursery (ages 2 to 5) has received comments from parents that the current menu is both unhealthy and repetitive. The cook is, therefore, planning to make changes to the menu to ensure it is healthy and appealing to the children.

OR

Elderly Residential Home

The cook at a local Elderly residential home has received comments that the current menu is unimaginative. The cook is therefore planning to make changes to the menu to ensure that dishes meet the nutritional needs of the elderly and have traditional appeal.

- (i) Review the nutritional considerations that the cook will need to include when planning a monthly menu for this target group.
- (ii) Plan a weekly menu; this must include breakfast, mid-morning snack, lunch, mid-afternoon snack and tea.
- (iii) Plan, prepare and cook a whole day's menu and review the nutritional content of your proposed one day menu. You will need to take photos of the dishes
- (iv) Evaluate your finished outcomes referring to their sensory characteristics and appeal for the target group
- (v) Discuss whether your choices reflect current nutritional guidelines for target group and suggest improvements or alternatives to your menu choices.

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Task 7: Practical task: cook a 'skillful' dish over the summer. cook a 'skillful' dish linked to your research in **task 6**. Photograph it and evaluate the dish in terms of how you made it, including the skills demonstrated, why it is suitable for your target group and how it fits with their dietary needs.

www.nutritionist-resource.org.uk

www.annabelkarmel.com

www.nhs.uk/Livewell/over60s

Task 8: Start collecting articles from newspapers and magazines linked to current food issues

Suggested reading list:

Food magazines and those related to diet and fitness

Textbooks

Bender, D. (2002). An Introduction to Nutrition and Metabolism (3rd Ed). Oxford, UK: Taylor and Francis Ltd

Fox and Cameron's Food Science, Nutrition and Health (7TH edition) Hodder Arnold Publication

Foskett D, Campbell J (2008) Practical Cookery (11th Ed) Hodder Education

Recipe books

Blumenthal H. Heston Blumenthal at home. Bloomsbury publishing: October 2011

Masterchef Kitchen Bible

Masterchef at home

Mary berry Cook books

Recommended Television shows/videos to watch - good to watch on iplayer

Come dine with me - Channel 4

Food Inspectors - BBC 1

Great British Bake off - BBC2

Masterchef- BBC1

Heston Blumenthal - Channel 4

Jimmy's Food Factory - BBC1

Useful websites

BBC Health: www.bbc.co.uk/health/healthyliving

British Nutrition Foundation: www.nutrition.org.uk

Department for Health: www.dh.gov.uk

Food and Drink Federation: www.fdf.org.uk

Food Standards Agency: www.food.gov.uk/aboutus/publications/industrypublications/

NHS: <http://www.nhs.uk/livewell/healthy-eating/Pages/Healthyeating.aspx>

Physical Activity and Nutrition Wales: www.physicalactivityandnutritionwales.org.uk

Vegetarian Society: www.veg.soc.org.uk

www.bbc.co.uk/food/recipes

www.bbcgoodfood.com

www.annabelkarmel.com

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Summary of programme of study

Unit 1 Meeting Nutritional Needs of Specific Groups (Mandatory - Y12)

The purpose of this unit is to develop an understanding of the nutritional needs of specific target groups and plan and cook complex dishes to meet their nutritional needs. Through this unit, you will gain an understanding of how to identify hazards and minimise risks when producing food to meet the nutritional needs of specific groups. You will learn about different types of nutrients and how those are used by the body to ensure you can plan a balanced nutritious diet. You will develop advanced skills for preparing, cooking and presenting nutritious dishes that meet specific needs

Unit 2 Ensuring food is safe to eat (Mandatory - Y13)

In this unit you will learn about food safety, how micro-organisms can affect food safety, how some foods can cause ill health in people that have intolerances or allergies and what controls need to be in place to minimise the risks of food causing ill health. This learning will allow you to recommend the safety controls that should be in place in different environments where food is stored, prepared and cooked.

Unit 3 Experimenting to Solve Food Production Problems (either Unit 3 or 4 - Diploma)

The aim of this unit is for learners to use their understanding of the properties of food in order to plan and carry out experiments. The results of the experiments would be used to propose options to solve food production problems.

Unit 4 Current issues in consumer food choice (either Unit 3 or 4 - Diploma)

Through this unit you will have the opportunity to develop knowledge and understanding of issues are currently affecting consumer food choice. Through individual and group projects, you will learn about a range of consumer food choice issues and how key stakeholders are responding to these issues. The projects will also help you to develop the skills needed to effectively plan and carry out an individual research project.

Current issues may include:

Is it too expensive to eat healthy meals?

Energy density/nutrient density...

Are mass produced economy ready meals meeting the needs of individuals?

Should cooking skills be compulsory in schools?

How much extra will consumers pay for organic food?

What equipment will be needed for the subject?

An A4 ring binder, dividers

Recipe file and a Current health issues file

Suitable containers.

Ingredients for practical sessions.